

Abstract

Thermally-inhibited starches and flours which are functionally equivalent to chemically-crosslinked starches are prepared by a process which comprises the steps of dehydrating a granular starch or flour to anhydrous or substantially anhydrous (< 1% moisture) and heat treating the dehydrated starch or flour for a time and at a temperature sufficient to inhibit the starch, (e.g., 120-180°C for up to 20 hours). Preferably the pH of the starch is adjusted to neutral or greater (e.g., pH 8-9.5) prior to the dehydration. The dehydration may be a thermal dehydration carried out simultaneously with the heat treatment or a non-thermal dehydration carried out by extraction with a solvent (e.g., ethanol) or by freeze drying.

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